

Positive Future Thinking and Its Association with Depression in a Clinical Sample

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Abstract

Positive Psychology has gained an important role in mental health, especially since it has become clear that health is not merely the absence of illness. Concepts such as hope and optimism are two relevant Positive Future Thinking constructs related to well-being, life satisfaction and coping with adversities. Hope has been defined as a «positive motivational state that is based on an interactively derived sense of successful (a) agency (goal-directed energy) and (b) pathways (planning to meet goals)» (Snyder, Irving & Anderson, 1991), while optimism has been defined as «positive generalized outcome expectancies» (Scheier & Carver, 1985). Several authors have suggested that these concepts (and others such as self-esteem and self-efficacy) are difficult to differentiate from each other, pointing out the need to clarify and delimit in a better way the particular components of each construct. In an effort to shed light on these issues, this work analyzes the relationship between levels of hope, optimism and depression in a clinical sample. The sample was composed of 119 patients (from two psychological assistance services: PREVI and SAP), of which 96.6 % were women. The mean age was 44 years old (range 16 to 66 years). All of them answered a survey assessing optimism (Life Orientation Test-Revised), hope (Hope Scale) and depression (Beck Depression Inventory-II). A correlation analysis was performed on the data. Hope scores (agency, pathways and total score) were negatively and significantly related to depression. However, optimism was not significantly related to depression scores. In addition, optimism was associated with agency subscale and total hope scores, but not with pathways

subscale. These findings support the relevance of both hope and optimism concepts for the mental health field and agree with previous studies that found that they are related but not redundant concepts.

Keywords: hope, optimism, depression, positive future thinking, pathways, agency.

Resumen

La psicología positiva ha adquirido un papel importante en el campo de la salud mental, sobre todo desde que ha quedado claro que la salud no se define exclusivamente por la ausencia de enfermedad. Conceptos como optimismo y esperanza son dos constructos relevantes del pensamiento positivo sobre el futuro que están relacionados con el bienestar, la satisfacción con la vida y el afrontamiento de las adversidades. La esperanza ha sido definida como un «estado motivacional positivo basado en la interacción entre (a) la agencia (energía dirigida hacia una meta), y (b) las vías (planeación para alcanzar las metas)» (Snyder, Irving y Anderson, 1991), mientras que el optimismo se ha definido como «expectativas generalizadas de resultados positivos» (Scheier y Carver, 1985). Varios autores han sugerido que estos conceptos (y otros, como los de autoestima y autoeficacia) son difíciles de diferenciar entre sí, señalando la necesidad de aclarar y delimitar mejor los componentes particulares de cada concepto. Teniendo esto en cuenta, el objetivo de este trabajo fue establecer la relación entre los niveles de esperanza, optimismo y depresión en una muestra clínica. La muestra estuvo compuesta por 119 pacientes (de PREVI y SAP, dos servicios de asistencia psicológica), de los cuales el 96,6 % eran mujeres. La media de edad fue de 44 años (rango de 16 a 66 años). Todos ellos respondieron una encuesta que evaluaba optimismo (Life Orientation Test-Revisado), esperanza (Hope Scale) y depresión (Beck Depression Inventory-II). Se realizó un análisis correlacional de los datos mediante el programa estadístico SPSS. Los niveles de esperanza (agencia, vías y puntuación total) se relacionaron de forma negativa y significativa con los niveles de depresión. Sin embargo, no se detectó una relación significativa entre optimismo y depresión. Por otro lado, optimismo se asoció con la subescala de agencia y la puntuación total de Esperanza, pero no con la subescala de vías. Estos resultados refuerzan la importancia de estos conceptos en el campo de la salud mental y apoyan los estudios previos que encontraron que el optimismo y la esperanza son conceptos relacionados pero no redundantes.

Palabras clave: esperanza, optimismo, depresión, pensamiento positivo sobre el futuro, vías, agencia.

1. Introduction

Future thinking represents a key characteristic of human behavior, motivating and driving people through virtually all the actions in pursuit of their goals. Anticipating, planning, regulating one's behavior, emotions and attitudes, and so forth, are indispensable processes for the attainment of desired goals and thus for the wellbeing of an individual. In this respect, research has shown that positive future thinking (e.g., hope, optimism) is positively associated with bet-

ter behavior outcomes and higher overall wellbeing (Carver, Scheier & Segerstrom, 2010; Snyder, 2002) and negatively associated with negative psychological outcomes (Carver, Scheier & Segerstrom, 2010; Snyder, Irving & Anderson, 1991). In this work we will focus on two of these concepts, namely hope and optimism, and their relationship with depression.

1.1. Positive Future Thinking. Conceptual Delimitations

Future Thinking refers to the way an individual perceives and interprets the future. Positive and negative thinking should be regarded as two separate systems, where an increase in one domain will not necessarily mean a decline in the other (MacLeod & Moore, 2000). Research has focused on the importance of negative thoughts about the future and has paid less attention to the importance of positive expectations. Two key concepts within the study of people's positive expectations for the future are hope and optimism.

Snyder's hope theory is a thought-based model emphasizing the causal role of the goal-directed thought in generating emotions, in which positive emotions follow a perceived success in the pursuit of goals, while negative emotions are elicited by perceived failures (Snyder, 2000). Snyder defines hope as «a positive motivational state that is based on an interactively derived sense of successful (a) agency (goal-directed energy) and (b) pathways (planning to meet goals)» (Snyder, Irving & Anderson, 1991, p. 287). In other words, hope is «the sum of perceived capabilities to produce routes to desired goals, along with the perceived motivation to use those routes» (Snyder, 2000, p. 8). A central aspect of the hope theory formulated by Snyder is the presence of goals, which act as endpoints of the operations of hope, i.e. pathways thinking and agency thinking. The pathways component refers to the perceived ability to generate plausible routes to the desired goals and the means to overcome the difficulties arising in pursuing those goals, while the agency component refers to the motivation and willingness to use these routes to achieve the desired goals. Snyder's hope theory is based on the interaction between these two processes.

Optimism has been defined as the tendency to have «generalized expectancies for good outcomes» (Scheier & Carver, 1985, p. 243). Thus, when confronting a challenge, optimists tend to be more confident and persistent, even when progress is difficult, while pessimists tend to be more doubtful and hesitant. Being either optimist or pessimist can lead to differences in coping strategies, health behaviors, and the emotions experienced when confronting adversity (Carver, Scheier & Segerstrom, 2010).

Even though there are clear conceptual distinctions between hope, optimism, and other related concepts such as self-efficacy (Bandura, 1977), self-esteem (Wells & Marwell, 1976), optimistic attributional style (Seligman, 1991) and problem solving (Heppner & Hillerbrand, 1991), these concepts share some common ground (Snyder, 2000). For this reason, we will briefly discuss the main points of each of these models for a better understanding of them as related but independent concepts.

Optimism defined as positive generalized outcome expectancies (Scheier & Carver, 1985) somewhat resembles hope, in that both address agency-involved thoughts (efficacy expectancies) at an implicit level. However, hope theory emphasizes the personal causal influence through the agency component, while in optimism the potential causes for the outcome can be attributed to either internal forces (e.g., personal talents, consciousness) or external forces (e.g., helping friends/family, luck, religious/spiritual beliefs). The pathways component from hope theory is a concept that optimism does not address (Snyder, 2000). The previous work of several authors showed that hope and optimism are related but not redundant concepts (Carifio & Rhodes, 2002; Magaletta & Oliver, 1999).

The concept of self-efficacy is based on the premise that the person carries out a cognitive analysis in order to apprehend the relevant contingencies for goal achievement (outcome expectancies). These outcome expectancies reflect the person's perceived capacity to carry out those actions inherent in the outcome expectancies (efficacy expectancies) (Bandura, 1977). Although hope and self-efficacy share definitional components – including the goal emphasis, the outcome expectancies (in hope called pathways thoughts) and the efficacy expectancies (in hope called agency thoughts) – hope theory applies to both cross-situational and situational goals, while the self-efficacy concept focuses on situation-specific goals. Moreover, self-efficacy centers more on efficacy expectancies, while hope theory emphasizes both agency and pathways thoughts equally (Snyder, 2000).

Another concept that resembles hope is problem solving, which incorporates the pathways component by emphasizing the identification of a desired goal (usually the solution to a major problem) and by focusing on finding a route to the solution (Heppner & Hillerbrand, 1991). However, problem solving does not address the motivational component (agency) that hope theory does (Snyder, 2000).

Based on the reformulated helplessness model, which emphasizes the role of the attributions that people make for life events, Seligman (1991) introduced the optimistic attributional style. An optimistic attributional style is a pattern of variable, specific and external attributions for failures, as opposed to the stable, global and internal attributions made in the helplessness model (Abramson, Seligman & Teasdale, 1978). In the optimistic attributional style model it is assumed that people will attempt to distance themselves from past negative outcomes, while in hope theory it is assumed the individual will focus on reaching desired future positive outcomes. The concern related to distancing from past negative outcomes is not a feature of high-hopers; on the contrary, past negative outcomes are used as learning experiences for the better pursuit of goals (Snyder, 2000).

Self-esteem theories resemble hope theory by implicitly assuming a goal-directed perspective and the supposition that the activity is valued by the person (Snyder, 2000). Contrary to esteem models, hope theory accentuates the underlying source of a given emotion related to the goal pursuit. Research has shown that goal pursuit thoughts (hope) influence self-esteem (Snyder, 2000).

1.2. Hope, Optimism and Depression

Both hope and optimism have been studied in the context of health, wellbeing and life satisfaction and proved to be significantly related to variations in these areas. Hope has been linked to life satisfaction (Bailey, Eng, Frisch & Snyder, 2007), better outcomes in academics, athletics, physical health, psychological adjustment, and psychotherapy (Snyder, 2002; Snyder, Irving & Anderson, 1991), more adaptive coping responses in dealing with cancer (Irving, Snyder & Crowson, 1998), and success in cognitive-behavioral interventions (Snyder, Ilardi, Cheavens, Michael, Yamhure & Sympson, 2000). Optimism has been linked to subjective wellbeing, functional coping strategies, adaptive health behaviors, socioeconomic and social resources (Carver, Scheier & Segerstrom, 2010), physical wellbeing (Carver, Scheier & Segerstrom, 2010; Scheier & Carver, 1985; 1992; Scheier, Matthews, Owens, Schulz, Bridges, Magovern & Carver, 1999), psychological wellbeing (Scheier & Carver, 1992), and life satisfaction (Bailey, Eng, Frisch & Snyder, 2007).

Hope and optimism have also been inversely associated with negative outcomes. For example, hope has been negatively linked with negative mental and physical health outcomes (Arnau, Rosen, Finch, Rhudy & Fortunato, 2007; Chang, 1998; Geiger & Kwon, 2010; Irving,

Snyder & Crowson, 1998; Snyder *et al.*, 1991), poor academic performance (Snyder, Shorey, Cheavens, Pulvers, Adams & Wiklund, 2002) and suicide (Cole, 1988; Kazdin, French, Unis, Esveltd-Dawson & Sherick, 1983). Optimism has been negatively associated with inadequate coping strategies, life dissatisfaction and poor mental and physical health (Carver *et al.*, 1994; Carver, Scheier & Segerstrom, 2010; Endrighi, Hamer & Steptoe, 2011; Marshall, Wortman, Kusulas, Hervig & Vickers, 1992).

In the mental health field, depression is a disorder often associated with low levels of optimism and high levels of pessimism (Giltay, Zitman & Kromhout, 2006; Grote, Bledsoe, Larkin, Lemay & Brown, 2007; Ironson *et al.*, 2005; Puskar, Sereika, Lamb, Tusaie-Mumford & McGuinness, 1999; Reker, 1997; Vickers & Vogeltanz, 2000), and low levels of hope and high levels of hopelessness (Elliott, Witty, Herrick & Hoffman, 1991; Lynch, Kroencke & Denney, 2001; Salter & Platt, 1990; Thio & Elliott, 2005). Some of this research also underlines the long-term protective role that optimism and hope have against developing depressive symptoms (e.g., Grote *et al.*, 2007; Thio & Elliott, 2005). Chang, Yu and Hirsch (2013) explored the interaction of hope and optimism in predicting depression, and concluded that beyond optimism and hope, the interaction between optimism and hope significantly augmented the prediction of depressive symptoms. Moreover, their results suggest a pattern indicating a greater involvement of hope, compared to optimism, in depression among individuals at risk for mood disorders.

Snyder (2000) emphasized the role that both pathways and agency thinking have in generating hope in individuals. However, the role of the two components in predicting positive and negative outcomes has not been studied much. Research on the differential association between pathways and agency – the two components of hope – and different psychological variables is limited, and the results sometimes contradictory. For example, agency component and pathways component have been studied in relation to maladjustment (Cramer & Dyrkacz, 1998), problem solving and psychological adjustment (Chang, 2003), anxiety (Arnau, Rosen, Finch, Rhudy & Fortunato, 2007), attrition from a self-directed intervention (Geraghty, Wood & Hyland, 2010) and suicidality (Range & Penton, 1994). Studies that have explored the relationship between hope components and depression have reported contradictory results. Arnau *et al.* (2007) found that the agency component of hope had significant negative effects on depression, but that the pathways component had no effect. The findings reported by Wong and Lim (2009) support the results of Arnau *et al.* (2007), concluding that between the two hope components, agency is the only significant predictor of depression. Conversely, Elliott *et al.* (1991) found that only the pathways component was predictive of depression, and not the agency component.

Needless to say, these results are contradictory and point to the need to look more closely at how the two components of hope relate to depression. Likewise, the similarities and differences between hope and optimism deserve greater attention. For these reasons, we conducted a study that investigated the relationship between hope, optimism and depression in a clinical sample in order to shed light on these questions.

Specifically, the present study explores (1) the association between the agency and pathways components of hope and depression, (2) the association between optimism and depression, and (3) the relationship between hope, the agency and pathways components of hope, and optimism. Considering the equal emphasis given to both components of hope in Snyder's hope theory, we expected correlations between both the agency and pathways components with depression. Considering that previous studies have established a relationship between optimism and depression, we expected a moderate correlation between the two. Given that both optimism and hope involve positive future expectancies we also anticipated a moderate correlation between hope and optimism.

2. Method

2.1. Participants

The sample consisted of 119 patients. Among them were a group of patients diagnosed with fibromyalgia ($n = 75$), a group with cancer ($n = 22$), and a mixed group with eating disorders and personality disorders ($n = 22$). The participants were recruited from two psychological assistance services, SAP (Servicio de Asistencia Psicológica, James I University, Castellón de la Plana, Spain) and PREVI (Psicología y Realidad Virtual, Valencia, Spain). The sample was composed of mainly women (96.6 %), with a mean age of 44 years old (range 16 to 66 years).

2.2. Measures

Hope

Hope was assessed using the Spanish adaptation of the Hope Scale (HS; Spanish version, work in progress; Snyder *et al.*, 1991). The HS is a 12-item measure of dispositional hope that uses an 8-point Likert scale, ranging from 1 (definitely false) to 8 (definitely true). Four of the items reflect the agency component, four reflect the pathways component and four are filler items. The HS offers a total score that reflects the level of hope and two additional scores for each of the subscales (i.e., agency and pathways).

Optimism

Optimism was assessed with the Spanish version of the Life Orientation Test – Revised (LOT-R; Otero, Luengo, Romero, Gómez & Castro, 1998; Scheier, Carver & Bridges, 1994). The LOT-R is a 10-item measure of individual differences in generalized positive and negative outcome expectancies that uses a 5-point Likert scale, ranging from 0 (strongly disagree) to 4 (strongly agree). Three items are positively worded, three are negatively worded and the remaining four are filler items. The LOT was designed to assess optimism as a unidimensional and bipolar construct, with optimism and pessimism at the two extremities (Scheier & Carver, 1985). However, there have been authors who have suggested that in LOT optimism and pessimism are two distinct factors, and thus recommend analyzing them separately in research (Herzberg, Glaesmer & Hoyer, 2006; Myers & Steed, 1999; Robinson-Whelen, Kim, MacCallum & Kiecolt-Glaser, 1997). The Spanish version of LOT-R was constructed to assess dispositional optimism as a unidimensional construct, thus we employed this approach in the present work, computing only the total scores for the LOT-R (Mera & Ortiz, 2012; Otero *et al.*, 1998).

Depression

The depressive symptoms were assessed using the Spanish version of the Beck Depression Inventory-II (BDI-II; Beck, Steer & Brown, 1996; Sanz, Navarro & Vázquez, 2003). BDI-II is a 21-item measure of depressive symptoms that uses a 4-point Likert scale, ranging from 0 to 3.

2.3. Procedure

Participants from clinical centers were individuals seeking treatment for psychological disorders, or emotional problems related to medical conditions. Participants were informed that the study was voluntary and confidential and signed a consent form stating their willingness to participate. No particular inclusion and exclusion criteria were established and no incentive was offered for participation.

All patients answered a survey assessing optimism (LOT-R), hope (HS) and depression (BDI-II). They filled out all the instruments individually in an assessment session.

A correlation analysis with SPSS was then performed.

3. Results

The correlations between the three measures (including the correlations for the two subscales of HS) are presented in Table 1. As the table shows, HS scores were found to be significantly and negatively associated with BDI-II scores ($r = -.44$, $p < .01$). In addition, the HS subscales – agency and pathways – showed a negative and significant correlation with BDI-II scores ($r = -.44$; $r = -.36$, $p < .01$). By contrast, LOT-R showed almost no correlation with BDI-II scores ($r = .02$, $p = \text{n.s.}$).

The correlation found between LOT-R and HS was small and significant ($r = .29$, $p < .01$). When looking at the relationship between LOT-R and the HS subscales, we encountered differential associations: the agency subscale and LOT-R correlated moderately and significantly ($r = .35$, $p < .01$), while the pathways subscale and LOT-R presented a weak and non-significant correlation ($r = .17$, $p = \text{n.s.}$). The implications of the results and the limitations of this study are discussed in the next section.

Table 1
Correlation Matrix of Variables

VARIABLE	VARIABLE				
	1	2	3	4	5
1. HS	—	.91**	.89**	.29**	-.44**
2. Agency		—	.64**	.35**	-.44**
3. Pathways			—	.17	-.36**
4. LOT-R				—	.02
5. BDI-II					—

Note. HS = Hope Scale; Agency = Agency Subscale of the Hope Scale; Pathways = Pathways Subscale of the Hope Scale; LOT-R = Life Orientation Test – Revised; BDI-II = Beck Depression Inventory-II.

** $p < .01$.

4. Discussion and Conclusions

As we expected, both hope components – agency and pathways – were significantly correlated to depression levels. Although modest, the associations between the total hope scores and depression, and between the individual agency and pathways scores and depression, were significant. The association between the total hope scores and depression is in line with the results from previous studies (e.g., Lynch, Kroencke & Denney, 2001; Thio & Elliott, 2005) that show hope is related to depression levels, with higher levels of hope being associated with less depressive symptomatology and vice versa. However, the significant correlations between depression and both hope components contradict previous studies, some of which show only the agency component is associated with depression (e.g., Arnau *et al.*, 2007; Wong & Lim, 2009), and one of which shows only the pathways component is associated with depression (Elliott *et al.*, 1991). This finding underlines the fact that not only the reduction of goal-directed energy but also the reduction of the perceived ability to find pathways towards desired goals might be important aspects in developing depressive symptoms, at least in this type of sample. It should be noted that the previous studies used non-clinical samples consisting of students (Arnau *et al.*, 2007; Wong & Lim, 2009), and that only Elliott *et al.* (1991) used a clinical sample formed by persons who had traumatically acquired spinal cord injuries. Perhaps for patients like the ones in the present study (patients with fibromyalgia, cancer, and eating and personality disorders) the reduced ability to generate different pathways towards their goals is more linked to depression than it is for non-clinical individuals.

The non-association between optimism and depression found in the present study is in disagreement with most of the studies conducted in this field. However, there have been several authors who found little or no evidence for the association between optimism and depression (e.g., Boland & Cappeliez, 1997; Fontaine & Jones, 1997; Marshall & Lang, 1990). Again, perhaps the unique characteristics, namely the gender ratio and diagnosed diseases and disorders, of the present sample account for this weak relation. Moreover, these results corroborate the pattern found by Chang *et al.* (2013) indicating the greater involvement of hope, compared to optimism, in depression among individuals at risk for mood disorders. This pattern suggests furthermore that for at-risk adults, having a strong sense that one has the ability and means to achieve desired goals may matter more than just having a positive outlook on life. However, this pattern is not consistent across all cultures and samples. Wong and Lim (2009) found that optimism was more involved than hope in predicting depressive symptomatology, a result that Chang *et al.* (2013) suggest could be attributed to cultural differences, age, or both.

As we expected, our findings show that the correlation between hope and optimism is both significant and small, indicating that hope and optimism are related but independent constructs. The correlations between optimism and the two components of hope provide further evidence for this affirmation: while the agency component appeared to be significantly related to optimism, the pathways component had no significant relation to optimism. These results suggest that the common ground shared by hope and optimism lies in the agency component and that the pathways component is an intrinsic aspect of hope, not shared with optimism.

The present study has a number of limitations. First, the cross-sectional design used in this study prevents us from drawing causal relations. In this respect, future longitudinal studies can explore how optimism and hope and its components predict levels of depressive symptoms across time. Second, the present study was only correlational, and did not rule out other causal factors. Greater clarification is needed using a different analytic approach that will allow us to explore the relationship between these constructs in a deeper way. Third, the sample of participants consisted of mainly women with heterogeneous diagnoses, which makes it hard to gener-

alize our findings. However, this was due to the characteristics of this particular sample (i.e., in Spain, the prevalence of fibromyalgia is 4.2 % in women versus 0.2 % in men; Mas *et al.*, 2008). Perhaps a more demographically diverse sample will shed more light on these matters.

In conclusion, we examined the association of hope and its two components – agency and pathways – with optimism, and the relationship between these constructs and depression in a clinical sample. There were differential correlations between hope and depression and between optimism and depression. The present findings point to the association of both agency and pathways components with depressive symptomatology, which underlines the importance of both components in the depressive symptomatology and provides further evidence for the validity of the hope construct. Our findings suggest that there is a small association between hope and optimism, an association that lies in the agency component of hope, but that hope and optimism are nevertheless distinct constructs. Further studies are needed in order to explore these differences.

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